ENGAGING FARMERS IN THE MCKENZIE WATERSHED

SOURCE PROTECTION

HEALTHY FARMS CLEAN WATER PROGRAM

BERGGREN DEMONSTRATION FARM

THE BERGGREN WATERSHED CONSERVATION AREA (BWCA) is owned by the McKenzie River Trust (MRT) and was

impacts on the river. This 92-acre property contains about 60 acres of riparian habitat which will be restored and

with pollinator benefits, accessing local markets and having working lands coexist with riparian floodplain areas.

purchased with funds from the Bonneville Power Administration (BPA) and EWEB primarily to mitigate for hydropower

maintained for fish and wildlife habitat. The remaining 30 acres will be a demonstration farm managed by Cascade Pacific

Resource Conservation & Development and designed to showcase a variety of sustainable farming and land management

practices included in the Healthy Farms Clean Water Program. These practices include reduced chemical inputs, buffers



THE MCKENZIE WATERSHED

Located in western Oregon, the McKenzie Watershed encompasses approximately 1300 square miles and extends from the Cascade Mountains west to the Eugene-Springfield Metro area. Home to Spring Chinook salmon and one of the last remaining native Bull Trout populations, the watershed contains world class fishing and boating, as well as other recreational opportunities.

THE MCKENZIE RIVER AND SOURCE PROTECTION

The McKenzie River is the sole source of drinking water for over 200,000 people in Eugene, Oregon. The Eugene Water & Electric Board (EWEB) has developed a comprehensive source water protection program to protect the excellent water quality of the McKenzie for current and future generations. EWEB has identified a number of threats to water quality, one of which is runoff from agricultural lands.



New construction along the McKenzie River often results in the clearing of vegetation, removing a source of shading, as well as an important buffer that can filter pollutants and sediment before they reach

ENGAGING MCKENZIE FARMERS

In the face of growing concern and uncertainty about the effects of climate change, EWEB seeks to support local agriculture and preserve farmland in the floodplain as a way to mitigate for the more extreme weather events that have been predicted to occur in the Pacific Northwest. Unlike development agricultural land located along waterways allows rivers to overflow their banks periodically with less damage to structures and reduced risk to human safety. In addition, agricultural land is a preferred land use to increased development and its accompanying water quality concerns (such as urban runoff, riparian vegetation removal, septic systems). EWEB's goal is to help farmers both reduce their chemical use and increase their economic viability in order to protect farmland from development pressures.

Reduce chemical storage on farms

EWEB has partnered with local agencies (Lane County Waste Management, Oregon State University Extension Service, Springfield Utility Board, Oregon Department of Environmental Quality, and the Southern Willamette Valley Groundwater Management Area) to conduct a number of free agricultural chemical collection events for farmers. These events provide farmers with free, no-risk opportunities to dispose of their old unwanted or unused pesticides, fertilizers, or other farm chemicals. This serves to both protect regional drinking water sources and the health and safety of families, friends, and animals.

The top two photos show chemicals as they exist on farms – often not well contained or in degraded containers. The bottom two photos show how the chemicals were collected, unloaded, and packaged by Lane County Waste Management staff at the collection events for safe transport to an incineration facility. Over 10 days in 2006/2007, approximately 44 tons of chemicals were collected from 126 farmers in the McKenzie and Middle Fork Willamette Watersheds and the Southern Willamette Valley Groundwater Management Area.









 Reduce chemical use by transitioning to certified organic crops and/or engaging in best management practices.

EWEB'S HEALTHY FARMS CLEAN WATER (HFCW) PROGRAM is designed to encourage sustainable agricultural practices

in the watershed and ultimately strengthen food supplies to local communities while protecting regional drinking water

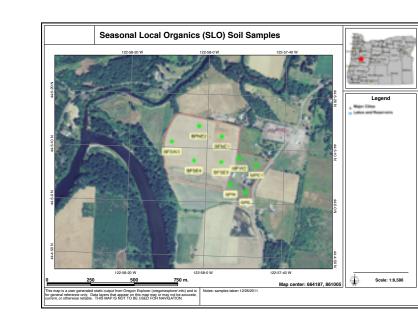
resources. The program provides financial incentives for farmers to reduce operating costs while increasing farm income:

CASE STUDY: MCKENZIE HAZELNUT FARMERS

1. A group of hazelnut growers in the McKenzie Watershed took advantage of free soil and leaf sampling and then worked together with staff from OSU Extension Service and the Upper Willamette Soil & Water Conservation District to develop nutrient management plans for their fields.

2. EWEB supported a proposal they developed to share the costs of applying lime in order to reduce the amount of nitrogen-based fertilizers applied to their hazelnut orchards and reduce potential runoff into the river.

3. This group of farmers is also working to together with OSU researchers, OSU Extension Service, the Oregon Hazelnut Commission and EWEB to develop a research project designed to evaluate the use of mating disruption techniques and 'soft' pesticides as a way to reduce the detrimental effects of filbert worm on crops and reduce the need for more toxic pesticide applications.



Example of a map showing soil sampling locations

Soil and leaf samples are sent to an accredited

laboratory for analysis. Results are sent to the Upper

Willamette Soil & Water Conservation District and

staff share these results with farmers and work

together with them on developing nutrient

Example of leaf analysis results.

management plans that will help their crops.

 Sets
 Laboratory
 Samples WRIT Be
 Laboratory

 Reported
 Turnaround
 Stored Until
 Sample Number

 6-Wey-2011
 1 Day
 65-Jun-2011
 AE16256 - AE16256

Laboratory

Analysis

Nergen
N Normal 2-19 6.15 6.8 6.29 6.99 0 6.21 22 25 4.9 47 35 6 Ranges b b b b to to to 10 to 60 to 10 t HIGH

OPTIMUM

LOW

N NO3 P K Mg Ca Na S Zn Mn Cu Fe B Al Cl Mo Access local markets that tend to pay more for crops





ng a secure and sustainable food system within Lane County, Oregon. WFFC serves as a community connect with individuals, businesses, and institutions who are interested in sourcing products from Lane County farms. Each year WFFC publishes Locally Grown, a comprehensive guide of foods grown, raised and produced in Lane County and vicinity. FoodHub is n interactive online tool developed by Ecotrust that

 Participate in programs designed to increase energy efficiency, incorporate renewable energy, and reduce water consumption on farms



farms to decrease their operating costs. Cascade Pacific Resource Conservation & Development has an efficiency projects. CPRCD guides farmers through ll aspects of the project: conducting energy audits, project scoping and selection, coordinating with the cal utility, obtaining project funding from a variety of grants and incentives, and final project inspection. Photo courtesy of Leaping Lamb Farm.

 Protect and restore riparian habitat, and/or place a conservation or agricultural easement on property



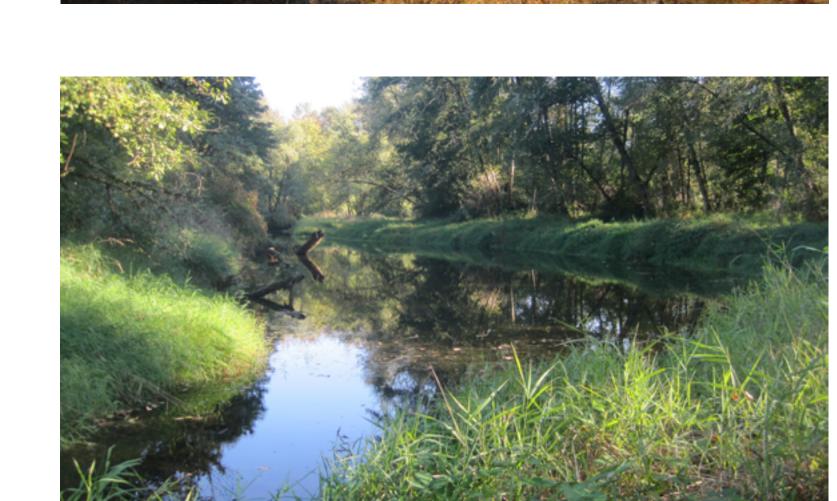
example of an offstream watering project. source. Accessing the river can cause erosion of the stream banks and livestock can contribute bacteria to directly accessing the river by fencing. Here, a solar oump is used to bring water from the river into a storage tank, where it will eventually flow into a





Agricultural Zone 29.34 acres

portion of the property. This area is flooded seasonally and crop selection will be carried out with



nvasive species removal, replanting of native species or ecosystem services provided by healthy riparian

trough for livestock to access.



aquatic species, stabilize streambanks to prevent erosion, filter sediment and chemicals that may run off of agricultural, urban or industrial forest lands and mitigate floodwaters during storm events. In addition, riparian areas are highly valued for thei aesthetic qualities and contributions to recreational activities. Farmers can work with the McKenzie Watershed Council to develop projects on their land to remove invasive species and restore riparian habitat.

Berggren Watershed Conservation Area (BWCA)

Riparian Zone 57.56 acres

BPA Conservation Easement Zones





